April 27, 1937. W. KOWAL 2,078,891

CLOSURE FOR RECEPTACLES

Filed March 21, 1936

Fig. 1.

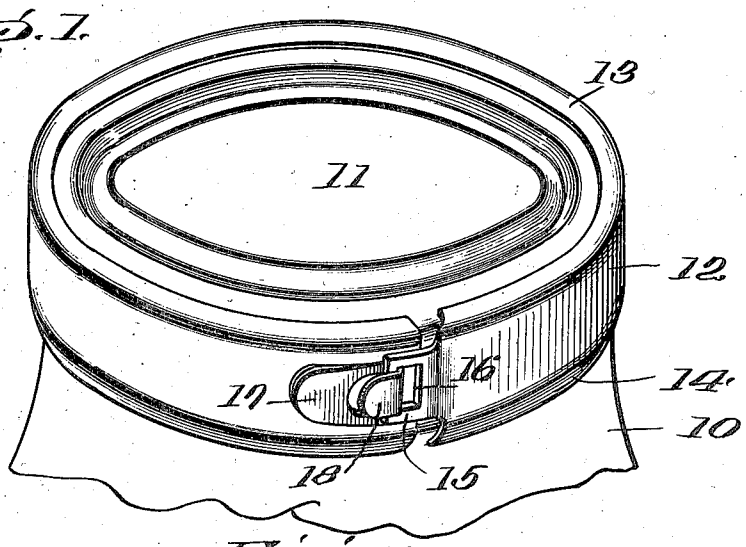


Fig. 4.

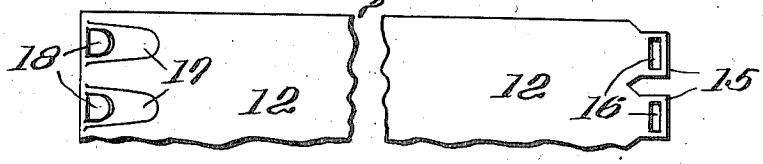


Fig. 5.

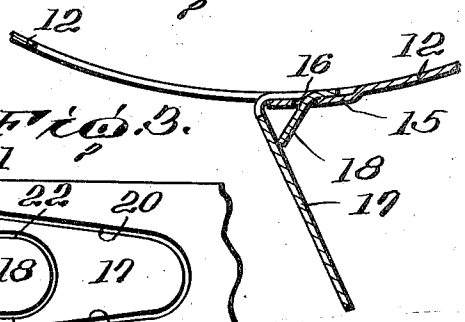


Fig. 6.

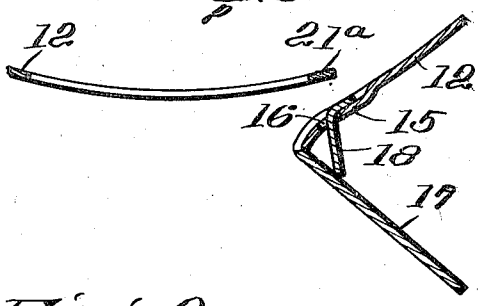


Fig. 3.

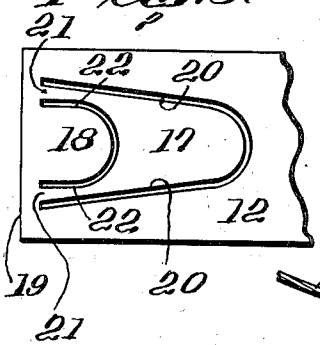
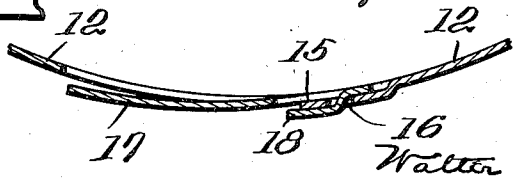


Fig. 2.



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UNITED STATES PATENT OFFICE

2,078,891

CLOSURE FOR RECEPTACLES

Walter Kowal, New York, N. Y., assignor to Phoenix Metal Cap Company, Inc., Chicago, Ill., a corporation of New York

Application March 21, 1936, Serial No. 70,124

5 Claims. (Cl. 215—95)

The present invention relates to new and useful improvements in a closure for receptacles, and more particularly to improvements in a bottle or jar closure which includes a cap having a retaining band.

An object of the invention is to provide a retaining band having cooperating connecting means at the ends thereof and releasing means located entirely within the body portion of the band so as to effect a substantial saving of material during the manufacturing of the bands.

A further object of the invention is to provide a retaining band having a releasing tongue located entirely within the body portion of the band adjacent one end thereof and a holding lug within the releasing tongue adapted for engagement with a recess at the opposite end of the band.

A further object of the invention is to provide a retaining band of the above type wherein the raising of the releasing tongue serves to rupture the metal joining the tongue and the holding lug to the band so as to prevent its re-use.

The above and other objects of the invention will in part be obvious and will be hereinafter more fully described.

In the drawing:

Fig. 1 is a perspective view showing a portion of the receptacle and the cap and retaining band secured thereon.

Fig. 2 is a sectional view through the connected ends of the retaining band.

Fig. 3 is an enlarged detail view of the end of the band containing the releasing tongue and the holding lug.

Fig. 4 is a view showing a portion of the blank from which the bands are formed.

Fig. 5 is a view similar to Fig. 2 but showing the releasing tongue raised for the purpose of separating the ends of the band.

Fig. 6 is a view similar to Fig. 5 showing the complete separation of the bands by the rupturing of the metal.

The invention relates generally to a jar or bottle closure of the type wherein the cap is secured to the jar or bottle by a retaining band.

The retaining band is formed from a strip of sheet metal and the upper portion thereof is turned inwardly in order to overlie the cap and the lower portion thereof, after the band has been placed over the end of the jar, is turned inwardly to underlie a shoulder on the jar so that the cap is thus held in sealed contact with the open end of the jar. In particular, the present invention is directed to the means for joining the ends of the retaining band. Heretofore, it has been a common expedient to provide one end of the band with a projecting releasing tongue and the other end of the band with a locking lug which projects through a slot in the releasing tongue and which is adapted to be folded down to hold the ends of the band together. In this type of retaining band, the releasing tongue projects beyond the end of the band, and therefore, in the forming of the band with the releasing tongue integral therewith, a blank must be cut which is of a length equal to the length of the band plus the length of the releasing tongue. One of the purposes of the present invention is to provide a construction of band wherein the releasing tongue is disposed entirely within the body portion or limits of the retaining band instead of projecting from one end thereof. With the releasing tongue and holding lug, as heretofore constructed, it was a simple matter to lift the holding lug, release the band, tamper with the contents of the jar, and reclose the jar with the same band by bending the holding lug back into its locking position. A further purpose of the present invention lies in the arrangement of the holding lug and releasing tongue relative to the end of the band so that when the releasing tongue is raised, the metal will be ruptured so that reclosing of the jar by the same band is prevented.

It is believed that the invention will be better understood by referring in detail to the accompanying drawing. In Fig. 1 of the drawing there is shown the upper portion of a receptacle or jar 10 having a cap 11 secured thereto by the improved retaining band which is indicated at 12. The outer edge of the cap is constructed in the usual manner so as to fit over the annular edge of the jar 10 and a suitable sealing material is provided between this cap and the lip of the jar so as to provide a seal when the cap is firmly secured to the jar.

The retaining band 12 is bent inwardly as indicated at 13 and this inwardly extending portion overlies the jar cap and bears on the same for holding said cap in tight sealed contact with the lip of the jar. One end of the band 12 is provided with a protruding tongue 15 which has an opening 16 therethrough. The other end of the band is stamped and shaped so as to provide within its limits and back from the end thereof a lifting or releasing tongue 17. Disposed within this releasing tongue is a holding lug 18. The tongue projects in a direction away from the end 19 of the band. The side edges 20, 20 of the tongue terminate at the points 21, 21 which are spaced only a short distance away from the end 19 of the

band. The side edges 22, 22 of the holding lug 18 are spaced a short distance away from the side edge 20, 20 respectively and these side edges 22, 22 terminate substantially in a line containing the points 21, 21 and parallel with the end of the band.

The ends of the bands are joined by bending the locking lug 18 outward relative to the outer face of the band and the inserting of the same through the opening 16 in the opposite end of the band. After the lug is passed through this opening it is then folded down to its holding position as shown in Fig. 1. The band with the ends joined and the cap assembled therein is placed on the jar, after which the lower edge 14 of the band is turned underneath a ledge on the neck of the jar. This is usually done by a spinning operation which draws the cap down into tight sealing contact with the lip of the jar.

When it is desired to release the jar closure, the releasing tongue 17 is raised as indicated in Fig. 5. The lifting of the releasing tongue will also raise the holding lug 18 and a further lifting movement on the releasing tongue will rupture the metal along lines extending from the points 21, 21 to the end 19 of the band. In Fig. 6 the metal is shown as ruptured at 21*a*. In view of the fact that the metal is ruptured by the rasing of the releasing tongue to release the locking lug 18, the band cannot be re-used. This prevents one from opening the jar by the lifting of the releasing tongue, tampering with the contents, and then reclosing the jar.

Furthermore, when the releasing tongue is placed at one end of the band and the locking lug at the other, then the width of the blank from which the band is cut must be equal to the length of the band plus the length of the releasing tongue. By my improved arrangement of the releasing tongue which is placed wholly within the band, the width of the blank from which the bands are cut is greatly reduced and thus a considerable saving of metal is accomplished. In Fig. 4 of the drawing, the blank from which the bands are produced is shown. It will be noted that the band extends across the blank from one side edge to the other, and therefore the width of the blank from which the band is formed is determined by the length of the band from one end thereof to the other plus the short projecting portion containing the opening for the holding lug.

From the above it will be apparent that a securing means for the end of a sealing band for jar closures has been produced which can be made from blanks of less width without in any way sacrificing the holding properties of the band when applied to a jar. Furthermore, a band is provided which may be readily opened by lifting a releasing tongue and the lifting of the releasing tongue results in a rupturing of the metal so that the ends of the band cannot be rejoined and the jar again sealed with the same band. This prevents tampering with the contents of the jar by unscrupulous persons.

It is obvious that many changes in the details of construction can be made without departing from the spirit of the invention set forth in the appended claims. From certain aspects of the invention it is essential that the releasing tongue shall be located wholly within the limits of the band and from other aspects of the invention the releasing tongue must be so located relative to the end of the band that the lifting of the same for the releasing of the band ruptures the metal.

I claim:

1. A closure for jars comprising a cap and a sealing band for securing the cap to the jar, said sealing band having a holding lug disposed at one end of said band and adapted to extend through an opening formed in the other end of said band for joining the ends, a releasing tongue formed within the band at the end thereof containing the holding lug and disposed so as to lift the same and release the band when the tongue is raised.

2. A closure for jars comprising a cap and a sealing band for securing the cap to the jar, said sealing band having a holding lug adjacent one end thereof and an opening in the other end thereof adapted to receive said holding lug, and a releasing lug disposed within the band and at the end thereof provided with the holding lug so that the interengaging parts for securing the ends of the bands are disposed substantially within the limits of the band.

3. A closure for jars comprising a cap and a sealing band for securing the cap to the jar, said sealing band having a holding lug disposed and connected immediately adjacent one end of the band and having immediately adjacent the opposite end thereof an opening, and a releasing tongue located within the end limits of the band and within the side edges of the band, said holding lug being adapted to extend through said opening for securing the band on the jar independently of said releasing tongue, and said releasing tongue being disposed so as to rupture the band adjacent the connection between the ends thereof when the said releasing tongue is raised.

4. A closure for jars comprising a cap and a sealing band for securing the cap to the jar, said sealing band having a holding lug disposed at one end of the band and adapted to extend through an opening formed in the other end of the band for joining the end, and a releasing tongue located within the end of the band having the holding lug and disposed relative to the end thereof so that the raising of the releasing tongue will rupture the metal and release the ends of the band.

5. A closure for jars comprising a cap and a sealing band for securing the cap to the jar, said sealing band having a releasing tongue formed within the band and with the side edges terminating a short distance from the end of the band, a holding lug formed within the band and from the metal forming the releasing tongue, said holding lug being adapted to extend through an opening formed in the other end of the band for joining the ends.

WALTER KOWAL.